

### **3.0 A ALTERNATIVES CONSIDERED**

An EIS must identify and explain the “range of alternatives.” This includes all reasonable alternatives, which must be rigorously explored and objectively evaluated, and all other alternatives that are eliminated from detailed study with a brief discussion of the reasons for their being judged to be unreasonable.

Two alternatives have been evaluated in detail in this EIS. These are the Proposed Action, Construction and Operation of the NBACC Facility by DHS at Fort Detrick, Maryland, on a Site Adjacent to Existing USAMRIID Facilities (Alternative I), and No Action (Alternative II). The No Action Alternative has been included in accordance with CEQ regulations [40 CFR 1502.14(d)]. Although it would not satisfy the purpose of and need for the project, the No Action Alternative does establish the baseline to which the action alternative can be compared.

Three additional alternatives were identified: Construction and Operation of the NBACC Facility by DHS at another location within Fort Detrick (Alternative III); Construction and Operation of the NBACC Facility by DHS on other existing government-owned property outside Fort Detrick (Alternative IV), and Construction and Operation of the NBACC Facility by DHS on privately-owned property outside Fort Detrick (Alternative V). These alternatives were rejected as unreasonable, and therefore, were not evaluated in detail in this EIS.

The evaluations of the Proposed Action (Alternative I) and No Action (Alternative II) are discussed in Sections 3.1 and 3.2 below. The rejected alternatives are described in Section 3.3, along with the reasons for their elimination.

Environmental analyses of the reasonable alternatives are comprised of detailed discussion of the existing (baseline) environment in Sections 4.1 through 4.18, review of the environmental consequences of the Proposed Action and other reasonable alternative in Section 5.2, and comparison of the Proposed Action with the No Action Alternative in Section 5.3.

#### **3.1 ALTERNATIVE I - CONSTRUCTION AND OPERATION OF THE NATIONAL BIODEFENSE ANALYSIS AND COUNTERMEASURES CENTER FACILITY BY DHS AT FORT DETRICK, MARYLAND, ON A SITE ADJACENT TO EXISTING U.S. ARMY MEDICAL RESEARCH INSTITUTE OF INFECTIOUS DISEASES FACILITIES**

This alternative comprises the Proposed Action, which has been discussed in detail in Section 2.0 of this EIS. Its environmental impacts, as described in Section 5.2, will be negligible to minor, and mitigable. The proposed NBACC Facility will incorporate state-of-the-art design features and safety procedures to minimize potential threats from infectious agents to laboratory and clinical personnel working within it and to adjacent communities. This alternative is the preferred option between the two reasonable alternatives, as demonstrated in Section 5.3.

Alternative I (Construction and Operation of the NBACC Facility by DHS at Fort Detrick, Maryland, on a Site Adjacent to Existing USAMRIID Facilities) will fulfill the purpose of and need for the Proposed Action by providing much-needed BSL-3 and BSL-4 laboratory facilities for DHS research and for support of the operations in NBFAC. As noted in Section 1.2, NBACC’s threat validation, threat characterization, and forensics missions require BSL-4 facilities to

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with highly virulent pathogens, and the existing and currently planned BSL-4 laboratories in the U.S. are committed to other programs.

This Alternative fits the critical characteristics for the location of the proposed NBACC Facility specified in Section 1.2, as follows:

- Location in or near the National Capital area: To accomplish the mission requirements of DHS and to be immediately responsive to customers of the NBFAC and to ensure forensic quality (e.g., control of custody and rapid processing), the proposed NBACC Facility must be located within a convenient local distance to the headquarters of other Federal government agencies and to other assets for biodefense, including the FBI Hazardous Materials Response Unit Laboratory at Quantico, VA. The location of the NBACC Facility must be accessible via ground transportation within a 100-mile (two-hour) driving distance of Quantico and within a 60-mile (one-hour) distance from Washington, DC to satisfy mission requirements. Fort Detrick, located in Frederick, Frederick County, MD, is situated near Washington, DC and within the distance parameters required for the Proposed Action. The existing environment at Fort Detrick is discussed in detail in Section 4.0.
- Flexibility in the event of national emergency: Co-location with existing BSL-3 and BSL-4 laboratories and associated existing specialized supporting infrastructure for biocontainment facility operations are required to accomplish DHS mission objectives. USAMRIID's BSL-3 and BSL-4 laboratory facilities are housed in two buildings within the NIBC, and the NIAID IRF, currently under design, will have BSL-3 and BSL-4 laboratories located on an adjoining parcel within the NIBC.
- Synergy: NBACC will join other Federal laboratories at Fort Detrick, USAMRIID, and the future NIAID IRF. Although each facility will be implementing part of its agency's overall biodefense program, all will be contributing to a common understanding and knowledge base that could be shared across organizations.

In addition to the potential scientific synergies, implementation of the Proposed Action will likely result in operational benefits such as:

- \* Opportunities for scientists from USAMRIID, the NIAID IRF, and the proposed NBACC Facility to work as collaborators in each other's facilities to develop joint or collaborative projects, leveraging scientific expertise for each of the programs;
  - \* Potential joint committee for standards of practice in biosecurity / biosurety;
  - \* Opportunities for use of specialized equipment for aerosol studies and potentially for unique imaging studies;
  - \* Increased likelihood of partnering and/or providing a scientist exchange / sabbatical program where scientists from other DHS laboratories outside of the NIBC campus would work with scientists from the proposed NBACC Facility and, potentially, other co-located Federal laboratories in the NIBC at Fort Detrick; and
  - \* Options to conduct particularly large sample size studies or for multi-prong studies in animal models for BSL-3 or BSL-4 agents.
- Potential cost savings: When these types of specialized facilities are located in close physical proximity, sharing of services is possible. Locating the proposed NBACC Facility within the NIBC at Fort Detrick offers potential sharing of services in several areas:

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cupational Health programs, such as Special Immunization Programs for occupationally required vaccines.
- \* Repair / maintenance of biocontainment facilities and equipment: USAG provides maintenance personnel familiar with the specialized equipment in high-level biocontainment facilities, trained in biological laboratory safety, and participating in medical monitoring programs.
- \* Common management of waste streams: USAG owns and operates incinerators meeting all State of Maryland air pollution standards and state-permitted for disposal of Special Medical Wastes, and Fort Detrick is one of few installations with its own state-of-the-art, state-permitted, self-contained landfill.

### **3.2 ALTERNATIVE II - NO ACTION**

The No Action Alternative would result in the proposed NBACC Facility not being constructed and operated by DHS and, therefore, it would not be available to meet DHS mission requirements. This alternative is not the preferred option because it does not address DHS's critical need for BSL-3 and BSL-4 laboratory capacity. Furthermore, it is not responsive to the critical characteristics that are essential to satisfying the mission requirements of NBACC, as listed in Section 1.2, including location in the Washington, DC area; flexibility in the event of national emergency; synergy; and potential cost savings.

NBACC is presently operated as an extramural program, using various methods to perform the necessary research and forensics in existing laboratory space owned and operated by other agencies. Under the No Action Alternative, the portions of the mission of NBACC related to threat characterization and forensics work would continue to be extramural and fragmented, being performed at several dispersed BSL-3 and BSL-4 facilities that fall under government or commercial control. Facilities operating at BSL-4 can only be found at Fort Detrick, Maryland; Atlanta, Georgia; San Antonio, Texas; and Galveston, Texas. Of these existing facilities, only USAMRIID at Fort Detrick, Maryland is suitably located for the bioforensics work (near the headquarters of other Federal agencies in the Washington, DC area). Work required for the S&T biodefense mission cannot be accomplished because of the lack of available BSL-4 space. As noted in Section 1.2, the existing BSL-4 capacity is limited and largely committed to other programs.

Under the No Action Alternative, continued reliance on strictly extramural, contracted efforts would be subject to changes in market availability, such that suitable facilities may not be available for NBACC mission needs, as noted in Section 1.2. For example, current extramural operations of the forensics program are performed at USAMRIID under a three-year lease agreement. However, USAMRIID has indicated a need to use the leased facilities for its own mission after the stated period of performance on the lease.

The No Action Alternative lacks flexibility and is not responsive to the critical NBACC mission requirements. In the extramural mode of operations, contractual statements of work would have to be renegotiated, and other ongoing priority research would be delayed at a time of exigent need. Furthermore a strictly extramural program would not be compatible with a key objective for DHS, to build a cohesive science program and enduring capability linking the major NBACC efforts.

Analyses of the

environmental consequences of the No Action Alternative are required under CEQ regulations [40 CFR 1502.14(d)]. As discussed in Section 5.3, under the No Action Alternative the potential environmental impacts in the vicinity of Fort Detrick associated with construction and operation of the proposed NBACC Facility would not occur. However, the proposed site would remain a part of the NIBC and it is reasonable to expect that the property would be developed at a future date for another biological research facility (USAG, 2003a).

### 3.3 REJECTED ALTERNATIVES

In accordance with the CEQ regulations, the alternatives eliminated from further consideration are presented below, with a brief discussion of the reasons for their elimination. These alternatives will not be explored or evaluated within Sections 4.0 and 5.0 of this EIS.

#### 3.3.1 ALTERNATIVE III - CONSTRUCTION AND OPERATION OF THE NATIONAL BIODEFENSE ANALYSIS AND COUNTERMEASURES CENTER FACILITY BY DHS AT ANOTHER LOCATION WITHIN FORT DETRICK

Alternative III would involve the Construction and Operation of the proposed NBACC Facility by DHS at another location within Fort Detrick, that is, at a site outside the NIBC. This alternative would fulfill the purpose of and need for the Proposed Action by providing much-needed BSL-3 and BSL-4 laboratory facilities for DHS research at a location near Washington, DC and co-located with existing BSL-3 and BSL-4 laboratories and associated existing specialized supporting infrastructure for biocontainment facility operations and physical security.

Under this alternative, the environmental consequences would likely be very similar to those of Alternative I (Construction and Operation of the NBACC Facility by DHS at Fort Detrick, Maryland, on a Site Adjacent to Existing USAMRIID Facilities). Details of the construction and operation of the NBACC Facility would likely be essentially the same as those presented in Section 2.0.

However, Alternative III has been rejected as unreasonable, and therefore it has not been evaluated in detail in Sections 4.0 and 5.0 of this EIS. Although a specific substitute location for the NBACC Facility within Fort Detrick and outside of the NIBC area has not been identified, it would be further removed from USAMRIID and NIAID BSL-3 and BSL-4 facilities than for Alternative I (Construction and Operation of the NBACC Facility by DHS at Fort Detrick, Maryland, on a Site Adjacent to Existing USAMRIID Facilities) and, therefore, less favorable for utilization of existing infrastructure and for synergy among personnel from these agencies and the NBACC Facility. Any other location on either Area A or Area B of Fort Detrick would not be consistent with Installation land use planning (see Section 4.1.3). In addition, a location on Area B of Fort Detrick would require development of utilities and roadways, many of which already exist on Area A, and would most likely result in greater potential environmental impacts than those of Alternative I (Construction and Operation of the NBACC Facility by DHS at Fort Detrick, Maryland, on a Site Adjacent to Existing USAMRIID Facilities).

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TERNATIVE IV - CONSTRUCTION AND OPERATION OF THE NATIONAL  
BIODEFENSE ANALYSIS AND COUNTERMEASURES CENTER FACILITY BY DHS  
ON AN EXISTING GOVERNMENT-OWNED PROPERTY OUTSIDE FORT DETRICK

Alternative IV would involve siting the proposed NBACC Facility outside Fort Detrick, on existing government-owned property elsewhere in the Washington, DC area. Several potential government-owned sites are located in the Washington, DC area and of a size and type that could accommodate the proposed NBACC Facility. Although a specific substitute location for the NBACC Facility on an Existing Government-Owned Property Outside Fort Detrick has not been identified, details of the Construction and Operation of the NBACC Facility at such a location would likely be similar to those presented in Section 2.0.

This alternative would partially fulfill the purpose and need for the Proposed Action by providing much-needed BSL-3 and BSL-4 laboratory facilities for DHS research at a location near government agency headquarters in the Washington, DC area. However, it would not meet the critical NBACC mission requirement for co-location with existing BSL-3 and BSL-4 laboratories and the specialized supporting infrastructure and, therefore, would not provide either flexibility in the event of a national emergency or opportunities for synergy among researchers. Alternative IV has been rejected as unreasonable, and therefore it has not been evaluated in detail in Sections 4.0 and 5.0 of this EIS.

3.3.3 ALTERNATIVE V - CONSTRUCTION AND OPERATION OF THE NATIONAL  
BIODEFENSE ANALYSIS AND COUNTERMEASURES CENTER FACILITY BY DHS  
ON AN CURRENTLY PRIVATELY-OWNED PROPERTY OUTSIDE FORT DETRICK

Alternative V would involve siting the proposed NBACC Facility outside Fort Detrick, on private property elsewhere in the Washington, DC area. Although this EIS has not screened potential sites, there may be privately-owned sites in the Washington, DC area of a size and type that could accommodate the proposed NBACC Facility. Details of the Construction and Operation of the proposed NBACC Facility at such a location would likely be similar to those presented in Section 2.0. It is possible that utilities, roads, and other infrastructure or services would have to be extended to support the facility.

This alternative would partially fulfill the purpose and need for the Proposed Action by providing much-needed BSL-3 and BSL-4 laboratory facilities for DHS research at a location near government agency headquarters in the Washington, DC area. However, it would not meet the critical NBACC mission requirement for co-location with existing BSL-3 and BSL-4 laboratories and the specialized supporting infrastructure and, therefore, would not provide either flexibility in the event of a national emergency or opportunities for synergy among researchers. In addition, it would likely be less cost-effective than the other options, since the specialized supporting infrastructure, logistics, and security requirements would all have to be provided. Alternative V has been rejected as unreasonable, and therefore it has not been evaluated in detail in Sections 4.0 and 5.0 of this EIS.

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